

# IMPROVED PROCESS FOR FORMING A BURIED PLATE

## Abstract

A method of making a buried plate region in a semiconductor substrate is provided. A trench is formed in a semiconductor substrate, the trench having a trench sidewall, the sidewall including an upper portion, and a lower portion disposed below the upper portion. A liner is formed along at least a portion of the trench sidewall, and thereafter, a dopant source layer is formed over the liner along the lower portion of the trench sidewall. The semiconductor substrate is then annealed to drive a dopant into the semiconductor substrate adjacent to the lower portion of the trench sidewall, while preventing the dopant from being driven into the semiconductor substrate adjacent to the upper portion of the trench sidewall.